

CLAIMS:

1. A controller suitable for use in controlling components in a bathing unit, said
5 controller comprising:
 - a. a plurality of connectors, each connector in said plurality of connectors
being adapted for providing electrical power to a respective bathing unit
component, each connector in said plurality of connectors including:
 - i. a set of contact elements arranged in a common configuration,
10 wherein;
 1. a first subset of said set of contact elements is adapted for
generating a power signal characterized by a first current-
voltage combination; and
 2. a second subset of said set of contact elements is adapted
15 for generating a power signal characterized by second
current-voltage combination.
2. A controller as defined in claim 1, said controller further comprising a plurality
20 of key members connected to respective connectors in the plurality of connectors
so as to allow bathing unit components having complementary key members to
be connected to connectors having key members matching the complementary
key members.
3. A controller as defined in claim 1, wherein said set of contact elements includes
25 a plurality of subsets of contact elements characterized by respective current-
voltage combinations.
4. A controller as defined in claim 2, wherein said key members are adapted for
releasably engaging said connectors.

5. A controller as defined in claim 1, wherein said controller comprises a control circuit adapted for controlling a supply of power to said plurality of connectors.
- 5 6. A controller as defined in claim 5, wherein each of said connectors is adapted to acquire an actuated state and a non-actuated state, when in the actuated state a connector being adapted for providing electrical power to a bathing unit component, when in the non-actuated state a connector being prevented from providing electrical power to a bathing unit component, said control circuit being adapted for:
- 10 a. receiving control signals associated to components in the bathing unit;
b. causing selected ones of the plurality of connectors to acquire either one of the actuated state and the non-actuated state on the basis of the control signals.
- 15 7. A controller as defined in claim 1, wherein:
- a. said first subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a first bathing unit component such as to release a signal characterized
- 20 by the first current-voltage combination; and
- b. said second subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a second bathing unit component such as to release a signal characterized by the second current-voltage combination.
- 25 8. A controller as defined in claim 1, wherein said set of contact elements includes a port for transmitting data to a bathing unit component.
9. A controller as defined in claim 8, wherein said port is adapted for receiving data

from a bathing unit component.

10. A controller as defined in claim 9, wherein said port is an analog port.

5 11. A controller as defined in claim 8, wherein said port is in the form of a serial link.

12. A connector suitable for providing electrical power to a bathing unit component, said connector including a set of contact elements, wherein;

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- a. a first subset of said set of contact elements is adapted for generating a power signal characterized by a first current-voltage combination; and
 - b. a second subset of said set of contact elements is adapted for generating a power signal characterized by second current-voltage combination.

13. A connector as defined in claim 12, wherein:

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- a. said first subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a first bathing unit component such as to release a signal characterized by the first current-voltage combination; and
 - b. said second subset of said set of contact elements is adapted for
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- establishing electrical connections with complementary contact elements associated to a second bathing unit component such as to release a signal characterized by the second current-voltage combination.

25 14. A controller suitable for use in controlling components in a bathing unit, said controller comprising:

- a. a plurality of connectors for supplying electrical power to a set of bathing unit components;
- b. a plurality of key members adapted connected to respective connectors in the plurality of connectors, the plurality of connectors allowing bathing

unit components having complementary key members to be connected to connectors having key members matching the complementary key members.

- 5 15. A controller as defined in claim 14, wherein said pluralities of key members are adapted for releasably engaging said connectors.
- 10 16. A controller as defined in claim 14, wherein said plurality of key members, when engaging said plurality of connectors, defines a bathing unit component connection pattern.
- 15 17. A controller as defined in claim 16, wherein said controller comprises a control circuit adapted for controlling a supply of power to said plurality of connectors in accordance with the bathing unit component connection pattern.
- 20 18. A controller as defined in claim 14, wherein each of said connectors is adapted to acquire an actuated state and a non-actuated state, when in the actuated state a connector being adapted for providing electrical power to a bathing unit component, when in the non-actuated state a connector being prevented from providing electrical power to a bathing unit component, said controller including a control circuit being adapted for:
- 25 a. receiving control signals associated to components in the bathing unit;
- b. causing selected ones of the plurality of connectors to acquire either one of the actuated state and the non-actuated state on the basis of the control signals.
19. A controller as defined in claim 14, wherein each connector in said plurality of connectors includes:
- a. a set of contact elements arranged in a common configuration, wherein;

- i. a first subset of said set of contact elements is adapted for generating a power signal characterized by a first current-voltage combination; and
- ii. a second subset of said set of contact elements is adapted for generating a power signal characterized by second current-voltage combination.

20. A controller as defined in claim 19, wherein said set of contact elements includes a plurality of subsets of contact elements characterized by respective current-voltage combinations.

21. A controller as defined in claim 19, wherein:
- a. said first subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a first bathing unit component such as to release a signal characterized by the first current-voltage combination; and
 - b. said second subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a second bathing unit component such as to release a signal characterized by the second current-voltage combination.

22. A keying system suitable for use in a bathing unit controller, the bathing unit controller including a connector adapted for providing electrical power to a bathing unit component, the bathing unit component including an electrical plug, said keying system comprising:

- a. a key member adapted for engaging the connector;
- b. a complementary key member adapted for engaging the electrical plug, so as to enable the electrical plug and the connector to establish an electrical connection when the key member and then complementary key

member match.

23. A keying system as defined in claim 22, wherein said key member includes descriptive indicia for facilitating location of a complementary key member matching the key member.

24. A keying system as defined in claim 22, wherein said descriptive indicia includes alpha-numeric characters.

25. A keying system as defined in claim 22, wherein said key member includes color indicia for facilitating location of a complementary key member matching the key member.

26. A keying system as defined in claim 22, wherein said key member is adapted for releasably engaging the connector.

27. A keying system as defined in claim 22, wherein said complementary key member is adapted for releasably engaging the electrical plug.

28. A bathing unit component suitable for use in a bathing unit having a controller, the controller comprising a plurality of connectors for supplying electrical power, said bathing unit component comprising a plug member having a complementary key member connected to said plug member so as to allow the bathing unit component to be connected to a connector on the controller having a matching key.

29. In combination:

- a. a controller suitable for use in controlling components in a bathing unit, said controller comprising a plurality of connectors, each connector in

said plurality of connectors including:

- i. a set of contact elements arranged in a common configuration,
wherein:

5 1. a first subset of said set of contact elements is adapted for
generating a power signal characterized by a first current-
voltage combination; and

2. a second subset of said set of contact elements is adapted
for generating a power signal characterized by second
current-voltage combination;

10 b. a plurality of bathing unit components adapted to engage respective one
of the plurality of connectors.

30. A combination as described in claim 29, wherein said combination comprises:

- a. a plurality of key members adapted for engaging said plurality connectors;
- 15 b. a plurality of complementary key members adapted for engaging
respective bathing unit components so as to allow the bathing unit
components to be connected to connectors having a matching key.

20 31. A combination as defined in claim 29, wherein said set of contact elements
includes a plurality of subsets of contact elements characterized by respective
current-voltage combinations.

25 32. A combination as described in claim 30, wherein said key members are adapted
for releasably engaging said connectors.

33. A combination as described in claim 29, wherein said controller comprises a
control circuit adapted for controlling a supply of power to said plurality of
connectors.

34. A combination as described in claim 33, wherein each of said connectors is adapted to acquire an actuated state and a non-actuated state, when in the actuated state a connector being adapted for providing electrical power to a bathing unit component, when in the non-actuated state a connector being prevented from providing electrical power to a bathing unit component, said control circuit being adapted for:
- a. receiving control signals associated to components in the bathing unit;
 - b. causing selected ones of the plurality of connectors to acquire either one of the actuated state and the non-actuated state on the basis of the control signals.
35. A combination as described in claim 29, wherein:
- a. said first subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a first bathing unit component of said plurality of bathing unit components such as to release a signal characterized by the first current-voltage combination; and
 - b. said second subset of said set of contact elements is adapted for establishing electrical connections with complementary contact elements associated to a second bathing unit component of said plurality of bathing unit components such as to release a signal characterized by the second current-voltage combination.
36. A combination as described in claim 29, wherein said plurality of bathing unit components includes a heating module.
37. The combination described in claim 29, wherein said plurality of bathing unit components includes a pump.

38. A controller suitable for use in controlling components in a bathing unit, said controller comprising:

- 5 a. a plurality of connector means for supplying electrical power to a set of bathing unit components;
- b. a plurality of key means connected to respective connector means in the plurality of connector means so as to allow bathing unit components having complementary key members to be connected to connector means having key means matching the complementary key members.

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